

REMARKS

The Official Action dated June 11, 2009 and the references cited therein have been carefully reviewed. In view of the amendments submitted herewith and the following remarks, favorable reconsideration and allowance of this application are respectfully requested.

At the outset Applicants note that claims 1, 5-7, 11-14, 16, 18-20, 22, 23, 25-27 and 38 are currently under consideration and that the Examiner has indicated that claim 14 is directed to allowable subject matter.

At page 3 of the Official Action, the Examiner has maintained the rejection of claims 12, 13, 16, 18-20, 22, 23, and 25-27 under 35 U.S.C. §102(b) as allegedly anticipated by Sorlie et al. (2001).

At page 9 of the Official Action, the Examiner has objected to claim 1 for containing a typographical error. This error has been corrected in accordance with the present amendment, thereby rendering the objection to this claim moot.

Claims 1, 5-7, 11-13, 16, 18-20, 22, 23, 25-27 and 38 stand rejected under 35 U.S.C. §103(a) as allegedly obvious over Sorlie et al. and further in view of Saurbrei et al.

The foregoing objections and rejections constitute all of the grounds set forth in the June 11, 2009 Official Action for refusing the present application. Each of these objections and rejections is traversed for the reasons set forth below.

CLAIM AMENDMENTS

Applicants do not concur with the positions taken by the Examiner but are making the following amendments for the sole purpose of expediting prosecution of the present application. Applicants reserve the right to file one or more continuing applications under 35 U.S.C. §120 on the subject matter cancelled in accordance with this amendment.

The claims have been amended as follows:

Claim 1 has been amended to insert a parenthesis bracket and to make clear that the sample obtained contains nucleic acids which specifically hybridize to the prognostic set of genes.

Claims 12, 16, and 22-23 have been amended to recite "consists of". Support for this amendment may be found at least at Pg 32-33 of the specification as filed. These claims have also been amended to clearly indicate that the methods and kits comprise binding members which specifically bind to the prognostic set of genes recited. Support for this amendment can be found throughout the specification.

Claim 13 has been deleted.

THE CLAIMS AS AMENDED ARE NOT ANTICIPATED BY SORLIE ET AL.

In order for a reference to anticipate a claim under 35 U.S.C. §102(b), it must identically disclose each and every element of the claim. Without conceding to the Examiner's opinion, claims 12, 16, 22 and 23 have been amended to recite that the prognostic set *consists of* the specific genes recited.

It is respectfully submitted that Sorlie et al. do not disclose or suggest an apparatus, kit or method of producing a nucleic acid expression profile with the specific prognostic

set of genes recited in the above mentioned claims as amended. Accordingly, the rejection of claims 12, 13, 16, 18-20, 22, 23, 25-27 and 38 as amended is inappropriate and should be withdrawn.

**CLAIMS 1, 5-7, 11-13, 16, 18-20, 22, 23, 25-27 AND 38 AS
AMENDED ARE NOT RENDERED OBVIOUS BY THE COMBINATION OF SORLIE
ET AL. IN VIEW OF SAURBREI ET AL.**

The Examiner has rejected the aforementioned claims based on the combination of Sorlie et al. in view of Saurbrei et al. Applicants respectfully disagree with the Examiner's position for the reasons set forth below.

Claim 1 has been amended to clearly recite that the sample obtained from the patient comprises SEQ ID NOS: 1-13. Moreover, claim 1 as previously presented clearly recites "assigning the breast tumour sample as being of either high NPI (NPI value at least or greater than a cut-off value of 3.8 to 4.6) or low NPI (NPI value < the cut-off value of 3.8 to 4.6), and wherein an upregulation of the nucleic acid expression products of adenine phosphoribosyltransferase, MCM4 minichromosome maintenance deficient 4 (*S. cerevisiae*), exonuclease 1, Metallothionein 1H-like protein, and clone IMAGE: 5270727 is indicative of high NPI or a poor prognosis, and wherein a downregulation of nucleic acid expression products of adenine phosphoribosyltransferase, MCM4 minichromosome maintenance deficient 4 (*S. cerevisiae*), exonuclease 1, Metallothionein 1H-like protein, and clone IMAGE: 5270727 is indicative of a low NPI or a good prognosis".

Neither Sorlie nor Saurbrei discloses or suggests this feature of correlating the NPI status with the upregulation and downregulation of the prognostic set of genes encompassed

by the claim.

Sorlie et al. are concerned with the clustering of tumor specimens into five (or six) subtypes of tumors based on microarray gene expression analysis of the selected 456 cDNA clones (Figure 1 of Sorlie). This reference does not disclose or suggest the correlation of the present specific prognostic set of genes with NPI status. The secondary reference Saubrei et al. only discusses standard NPI classification based on nodal status, tumor grade and tumor size. Clearly, the combination of these references does not place each and every element of the presently claimed invention in the hands of the public. Accordingly the rejection of these claims under 35 U.S.C. §103 is improper.

The present inventors have developed a method of determining the NPI status of breast cancer based on the expression profile of a specific prognostic set of genes. A combination of Sorlie and Saubrei does not render the feature of claim 1 discussed above obvious. It follows therefore that the subject matter encompassed by dependent claims 5-7 and 11 is also patentable over the cited prior art.

It is noted that the Examiner is of the opinion that claim 14 is allowable. In view of the amendments to claims 1, 12, 16, and 22-23 requiring that the prognostic set of genes consists of the recited genes, it is respectfully submitted that these claims and the relevant dependent claims 18-20 and 25-27 and 38 are also not obvious. In view of the foregoing amendments and remarks, Applicants submit that the rejection of the claims under 35 U.S.C. §103 is untenable and should be withdrawn.

CONCLUSION

It is respectfully requested that the amendments presented herewith be entered in this application, since the amendments are primarily formal, rather than substantive in nature. This amendment is believed to clearly place the

pending claims in condition for allowance. The claims as presently amended are also believed to eliminate certain issues and better define other issues which would be raised on appeal, should an appeal be necessary in this case.

In view of the amendments and remarks presented herein, it is respectfully urged that the rejections set forth in the June 11, 2009 Official Action be withdrawn and that this application be passed to issue. In the event the Examiner is not persuaded as to the allowability of any claim, and it appears that any outstanding issues may be resolved through a telephone interview, the Examiner is requested to telephone the undersigned attorney at the phone number given below.

Respectfully submitted,

DANN, DORFMAN, HERRELL AND SKILLMAN

A Professional Corporation

By  Kathleen D. Rigaut, Ph.D., J.D.

PTO Registration No. 43,047

Telephone: (215) 563-4100